

CLAIMS

1. A secret information setting device for generating secret information and setting secret information in a plurality of appliances in a system using shared secret
5 information that allows the appliances to communicate over a network, the secret information setting device comprising:

a generation instruction receiving unit that receives a secret information generation instruction from a user;

a secret information generation unit that generates the secret information in
10 response to the secret information generation instruction received with the generation instruction receiving unit;

a secret information storage unit that stores the secret information generated by the secret information generation unit;

a secret information transfer unit that transfers the secret information stored in
15 the secret information storage unit to the plurality of appliances; and

a secret information deleting unit that deletes the secret information stored in the secret information storage unit when a predetermined condition is satisfied.

2. The secret information setting device according to claim 1, wherein the secret
20 information generation unit generates the secret information based on internal information managed inside the device.

3. The secret information setting device according to claim 1, further comprising:
an external information receiving unit that receives external information that is
25 externally input in order to generate the secret information;

wherein the secret information generation unit generates the secret information based on the external information received by the external information receiving unit.

4. The secret information setting device according to claim 3, wherein the external information receiving unit is an input device, such as a keyboard or a pointing device for data input.

5. The secret information setting device according to claim 3, wherein the external information receiving unit is an image input device into which captured image information is input as the external information.

6. The secret information setting device according to any of claims 3 to 5, wherein the secret information generation unit takes the external information received with the external information receiving unit as said secret information.

7. The secret information setting device according to any of claims 3 to 5, wherein the secret information generation unit generates the secret information by arithmetically processing the external information received with the external information receiving unit.

8. The secret information setting device according to claim 1, wherein the secret information storage unit further stores the number of times that the secret information has been transferred to the outside; and

wherein the secret information transfer unit transfers the secret information to a number of appliances corresponding to the number of transfer times stored in the secret

information storage unit.

9. The secret information setting device according to claim 8, further comprising:
a transfer time setting unit for setting the number of transfer times that the
5 secret information is transferred to the outside;

wherein the secret information storage unit stores the number of transfers set
by the transfer time setting unit.

10. The secret information setting device according to claim 8, wherein the secret
10 information deleting unit deletes the secret information stored in the secret information
storage unit, if the secret information transfer unit has transferred the secret information
to a number of appliances corresponding to the number of transfers stored in the secret
information storage unit.

15 11. The secret information setting device according to claim 1, further comprising:
a clock unit that measures the time that has elapsed after a predetermined time
and outputs this clock information; and

a time limit judgment unit that determines the integrity of the secret
information stored in the secret information storage unit by comparing the clock
20 information that is output from the clock unit with judgment reference information;

wherein the secret information deleting unit deletes the secret information
stored in the secret information storage unit based on a determination of the time limit
judgment unit.

25 12. The secret information setting device according to claim 11, wherein the clock

unit measures the time that has elapsed from the time when the secret information generation unit has generated the secret information.

13. The secret information setting device according to claim 11, wherein the clock
5 unit measures the time that has elapsed from the time when the secret information transfer unit has first transferred the secret information.

14. The secret information setting device according to claim 13, wherein the time
limit judgment unit determines an appliance type to which the secret information
10 transfer unit transfers the secret information, and sets the judgment reference information based on that appliance type.

15. The secret information setting device according to claim 13, wherein the time
limit judgment unit determines a function type that is carried out using the secret
15 information, and sets the judgment reference information based on that function type.

16. The secret information setting device according to claim 14 or 15, further comprising:

a type value receiving unit receiving input of a type value representing the
20 appliance type or the function type;

wherein the time limit judgment unit sets the judgment reference information based on the type value received with the type value receiving unit.

17. The secret information setting device according to claim 14 or 15, wherein the
25 judgment reference information is an upper time limit based on that type value.

18. The secret information setting device according to claim 17, further comprising:

an extension instruction receiving unit that receives an instruction to extend the
5 upper time limit;

wherein the time limit judgment unit changes the judgment reference information in response to an extension instruction received with the extension instruction receiving unit.

10 19. The secret information setting device according to claim 1, wherein:

the secret information storage unit stores the number of appliances to which the secret information has been transferred by the secret information transfer unit; and

the secret information setting device further comprises a transfer number display unit that displays the number of appliances stored in the secret information
15 storage unit.

20. The secret information setting device according to claim 1,

further comprising a power supply unit that supplies power for a predetermined time to the secret information storage unit;

20 wherein the secret information storage unit stores the secret information only as long as power is supplied to it from the power supply unit.

21. A communication system using shared secret information to allow a plurality of appliances to communicate over a network, the communication system comprising:

25 a secret information setting device according to claim 1, which is not connected

to the network;

wherein the secret information setting device generates the secret information, and sets the secret information in the plurality of appliances without using the network.

5 22. The communication system according to claim 21, wherein the secret information setting device is a portable device.

23. The communication system according to claim 21, wherein the secret information setting device is a mobile phone terminal.

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24. The communication system according to claim 21, wherein the secret information setting device is a remote control for a home appliance.

25. A secret information setting method for generating secret information and
15 setting secret information in a plurality of appliances in a system using shared secret information that allows the appliances to communicate over a network, the secret information setting method comprising the steps of:

receiving a secret information generation instruction from a user;

generating the secret information in response to the received secret information

20 generation instruction;

storing generated secret information in a secret information storage unit;

transferring the secret information stored in the secret information storage unit to the plurality of appliances; and

deleting the secret information stored in the secret information storage unit

25 when a predetermined condition is satisfied.

26. A program for a secret information setting method for generating secret information and setting secret information in a plurality of appliances in a system using shared secret information that allows the appliances to communicate over a network, the
5 program performing on a computer a secret information setting method comprising the steps of:

receiving a secret information generation instruction from a user;

generating the secret information in response to the received secret information generation instruction;

10 storing generated secret information in a secret information storage unit;

transferring the secret information stored in the secret information storage unit to the plurality of appliances; and

deleting the secret information stored in the secret information storage unit when a predetermined condition is satisfied.

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27. A computer-readable recording medium storing a program for a secret information setting method for generating secret information and setting secret information in a plurality of appliances in a system using shared secret information that allows those appliances to communicate over a network, the secret information setting
20 method comprising the steps of:

receiving a secret information generation instruction from a user;

generating the secret information in response to the received secret information generation instruction;

storing generated secret information in a secret information storage unit;

25 transferring the secret information stored in the secret information storage unit

to the plurality of appliances; and

deleting the secret information stored in the secret information storage unit when a predetermined condition is satisfied.